



# WHAT IS TRAUMATIC BRAIN INJURY?

Traumatic brain injury (TBI) occurs when a sudden trauma, such as a bump, blow or jolt to the head, causes damage to the brain. **TBI IS A MEDICAL EMERGENCY.** Immediate assessment of the severity of the injury is needed.

## WHAT IS THE BURDEN OF TBI?

A leading cause of **DEATH AND DISABILITY**

**69 million** cases/year worldwide

**5 million** deaths/year worldwide

## WHAT ARE THE MOST COMMON CAUSES OF TBI?



FALL



CAR CRASH



ASSAULT



SPORT

## WHAT ARE THE MOST COMMON SIGNS AND SYMPTOMS OF TBI?



LOSS OF CONSCIOUSNESS



HEADACHE



VOMITING OR NAUSEA



CONFUSION OR DISORIENTATION



CONVULSIONS OR SEIZURES



TBI may have complications and be life-threatening. Seek medical assistance immediately. Even if the person seems OK at first, keep a close watch, as symptoms may appear 1 hour or more after the trauma.

## WHAT ARE THE DIFFERENT TYPES OF TBI?

MILD

MODERATE

SEVERE



**70-90%**

of brain injuries are considered to be of mild severity. Even though **mild TBI** may be less threatening than moderate and severe forms, it can still be serious and have complications. Concussion is a common type of mild TBI.

## WHAT ARE THE MAIN COMPLICATIONS OF TBI?



Skull fracture and/or bleeding leading to brain damage



Post-concussion syndrome (PCS)



IN SOME CASES, TBI CAN LEAD TO PERMANENT DISABILITY AND EVEN DEATH

## HOW IS TBI ASSESSED?



Initial assessment of injury severity, using specific clinical scores



CT\* scan to evaluate potential TBI complications

Blood tests represent a new approach to potentially reduce the number of CT-scans in some cases of mild TBI.



\*CT: Computed Tomography

## HOW IS TBI TREATED?

### MILD TBI

Optimal care may only be decided by a physician



Monitoring (24h)



Rest



Pain relievers

### MODERATE/SEVERE TBI

Admission to hospital (ICU\*, or ED\*\* in some cases)



Close monitoring (24/7)



Medication and/or surgery if needed to reduce risk of further brain damage

\*ICU: Intensive Care Unit \*\*ED: Emergency Department

## REFERENCES

Brain Trauma Foundation [www.braintrauma.org/faq](http://www.braintrauma.org/faq) Accessed on February 28, 2023.  
 CDC [www.cdc.gov/traumaticbraininjury/get\\_the\\_facts.html](http://www.cdc.gov/traumaticbraininjury/get_the_facts.html) Accessed on February 28, 2023.  
 CDC [www.cdc.gov/traumaticbraininjury/concussion/](http://www.cdc.gov/traumaticbraininjury/concussion/) Accessed on February 28, 2023.  
 Dewan MC, et al. J. Neurosurg. 2019;130:1080-1097.  
 Mayo Clinic [www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/diagnosis-treatment/drc-20378561](http://www.mayoclinic.org/diseases-conditions/traumatic-brain-injury/diagnosis-treatment/drc-20378561) Accessed on February 28, 2023.  
 Medical Xpress [www.medicalxpress.com/news/2009-03-brain-injury-victims-symptoms.html](http://www.medicalxpress.com/news/2009-03-brain-injury-victims-symptoms.html) Accessed on February 28, 2023.  
 Negida A, et al. J. Surg. Protoc. Res. Methodol. Volume 2021, Issue 1, September 2021.  
 Taylor CA, et al. MMWR Surveill Summ. 2017;66(9):1-16.